

TUVALU

Ecosystem-based Adaptation

2024-2029



SUSTAINABLE DEVELOPMENT GOALS



Improving agricultural productivity for 3,400 people through climate-resilient farming practices, such as improved irrigation and diversifying crops.



Introducing climate-resilient livelihoods for 800 beneficiaries and producing analyses to determine the optimum livelihood options.



Strengthening water security through alternative irrigation strategies, rooftop rainwater harvesting, and the distribution of 449 tanks (2000 liters each).



Supporting the revision and/or developing of 4 national plans and policies on climate adaptation.



Benefiting 7,000 inhabitants indirectly through improved ecosystem services, including the restoration of 534 hectares of forest and coastal ecosystems.



PROJECT TITLE:

ECOSYSTEM BASED ADAPTATION FOR IMPROVED LIVELIHOOD IN TUVALU

EXECUTING ENTITIES:



Ministry of Home Affairs, Climate Change and Environment, Tuvalu

KEY TARGETS:

4,200

People benefitting directly from the project's activities (around 38% of Tuvalu's population)

671

Hectares of agricultural land and coastal ecosystems under climate-resilient management

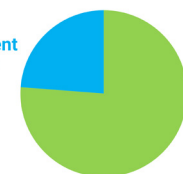
449

2,000 litre water tanks introduced across 8 Tuvaluan island to support water security, along with almost 450 *pulaka* pits

FUNDING:



Global Environment Facility
\$4.4m



Cofinance
\$14.1m

INTRODUCTION

- Like many Pacific islands, Tuvalu is considered one of the most vulnerable countries to climate change because the country's nine islands are small low-lying atolls, with an average height of 1 meter-above-sea level.
- Natural ecosystems in Tuvalu – including mangroves, coastal forest and coral reefs – provide key defenses for communities against the impacts of sea level rise and storms.
- A project is aiming to increase the climate resilience of communities in Tuvalu through ecosystem-based adaptation (EbA), an approach of using nature and ecosystems as part of an overall adaptation strategy.
- In addition to restoring damaged ecosystems, the project is building climate resilience through climate-resilient agricultural practices; supporting alternative, diversified livelihoods; and mainstreaming EbA into policies and planning through capacity building.

CLIMATE SOLUTIONS

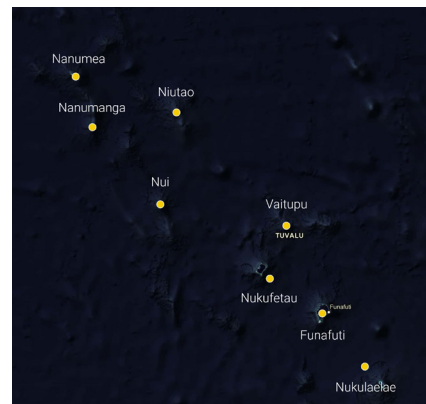
- The project is using a participatory **sustainable land management (SLM)** approach that incorporates climate-resilient agricultural practices and EbA.
- Using an **EbA approach**, the project is restoring around 180 hectares of coastal ecosystems to protect communities against coastal flooding and erosion by dissipating wave energy and reducing the height of the sea waves.
- The restoration involves either the **active planting** of salt-tolerant and indigenous plant species, or **assisted natural regeneration**, which involves removing sources of ecosystem degradation to allow ecosystems to regenerate.
- The **restoration and conservation** of 534 hectares of degraded coastal ecosystems near agricultural systems is increasing ecosystem services, which defences against tropical cyclones and flooding. **Buffer zones** composed of indigenous plants are

CLIMATE IMPACTS

- Projected rises in sea level will have substantial negative impacts on Tuvalu's islands by increasing coastal flooding and erosion – particularly during storm or tropical cyclone events – and saltwater intrusion into the freshwater sources.
- The impacts of sea level rise are exacerbated by increased rainfall variability and a projected rise in intense tropical cyclones, which increase the intensity of storm surges and erosion.
- Combined, these threats contribute to increased saltwater intrusion of freshwater sources, reduced overall agricultural productivity and ecosystem degradation. Prolonged dry periods are also leading to an overall reduction in freshwater sources. The agricultural sector is particularly under threat.
- These impacts are worsened by the degradation of valuable ecosystems, which normally provide protection from storm surges and flooding.

- being protected near farmlands to increase groundwater recharge through infiltration.
- Combined with ecosystem restoration, the project is **introducing climate-resilient agricultural practices** such as: i) intercropping; ii) crop diversification; iii) soil remediation; and iv) raised concrete beds to grow the culturally valuable pulaka, a staple crop key for food security in Tuvalu. The construction of these raised beds provides the pulaka with nutrition and prevents waterlogging.
- Crops are prioritized if they are both **drought- and salt-tolerant** to reduce the impacts of dry periods and saltwater intrusion, and **seed banks and nurseries** will be established on each of the 8 target islands to supply climate-resilient crops.
- **Drip irrigation** is being utilized to provide an efficient and reliable water source throughout the year. This irrigation method is highly water efficient as the amount of water released

PROJECT LOCATION



The project activities are taking place in 8 islands in Tuvalu.

- can be controlled to be only what is required and released just above the soil layer, thereby reducing evaporation losses.
- The project is restoring almost 450 pulaka pits with raised concrete beds and installing the same number of **water tanks** (2,000 liters each in capacity) across 8 islands to enhance food security.
- The conservation of coastal ecosystems will be strengthened further by identifying and promoting **diversified, sustainable livelihood practices** for 800 people (50% women) on Tuvalu's islands. Livelihood diversification is a globally recognized strategy to assist both community and ecosystem health.
- Examples of livelihood diversification are



CONTACTS

UNEP Task Manager:
Bunchingiv Bazartseren
bunchingiv.bazartseren@un.org
Country Team Contact
Pepetua Latasi
latasi@gov.tv

RESOURCES

- [UNEP project page](#)
- [Climate adaptation resources & multimedia](#)
- [Adaptation Gap Report 2023](#)
- [Global EbA Fund](#)

- the manufacture of **cultural handicrafts** that are traditionally made by women using natural materials and by-products of intercropping.
- The above solutions are strengthened by mainstreaming SLM and EbA principles into policies and planning through capacity building. This includes establishing **coordination workshops, training workshops** and a training programme for 100 government officials.
- The upscaling and sustainability of SLM approaches will be enhanced through 8 **community training groups** – including representatives from women's groups – are being established through training of trainer workshops around target sites to generate knowledge and upscale best practices.